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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VENKAT, JYOTHSNA A	

ART UNIT	PAPER NUMBER
1619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,181	MOUGIN, NATHALIE	
	Examiner	Art Unit	
	JYOTHSNA A. VENKAT	1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40,46,63-65,79-86,90 and 91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40, 46, 63-65 and 79-86 and 90-91* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of remarks filed on 11/20/08.

Status of claims

Claims 1-40, 46, 63-65 and 79-86 and 90-91 are pending and currently pending in the application. Claims 87-89 and 92-93 are withdrawn from consideration as being drawn to non-elected invention and claims 41-45, 47-62, 66-79 are withdrawn from consideration as being drawn to non-elected species.

Priority

Receipt is acknowledged of a certified English language translation of U.S. Provisional Application No. 60/459,259 in that application, including a cover sheet identifying the provisional application by number.

Claim Rejections - 35 USC § 103

Claims 1-40, 46, 63-65, 80-86 and 90-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U. S. Patents 6,113, 881 ('881) and 5, 527, 840 ('840) and 5,807, 937 ('937).

Patent '881 teaches styling compositions in the form of sprays and gels. See col.2, 11 30-48. Patent teaches that film forming polymers are used to provide a film on the hair and these compositions are in the form of spray. Patent at col.2, 11 49-54 teaches styling compositions in the form of gels. Patent at col.3, 11 30-31 teaches that resins or polymers are used in styling compositions and they are well known. Patent at col. 13, 11 55-68 teaches terpolymers (more than two monomers) in styling compositions. Patent '881 does not teach the specific film former claimed (elected species is drawn to a terpolymer). Patent '840 teaches the claimed species as a

film forming agent in coating. Patent clearly teaches the concept of coating a substrate. See the abstract for solvent, which can be water or organic solvent and this reads on the claimed "cosmetically acceptable medium". See examples 1 and 2-7. See table 1 for carboxy addition polymers. The patent discloses the claimed species. See also the average molecular weight and glass transition temperature. See col.4, 11, 32-33 for the weight percent of the carboxy polymer and the claimed weight percent of the gradient copolymer is within the weight percent of the polymer disclosed in the patent. See col.4, 11 58-64 for the molecular weight of the polymer. See col.6, 11 42-50 for the additives, which read on claim 86.Water reads on the claimed medium (claims 84-85). See table 1, examples A-G for claims 28-31. Acrylic acid is the hydrophilic monomeric residue. Patent does not state that the polymer is a gradient polymer claimed in the instant application.

Patent '937 teaches novel copolymers having useful structures and properties and teaches polymers formed by atom transfer radical polymerization (ATRP). See the abstract for gradient polymers, see figures. Patent at col.6, ll 45-60 teaches novel copolymers that are useful in variety of application and it also teaches copolymers in cosmetic and hair products. See col.8, see col.10, ll 39-68. Patent at col.14, line 45 through col.17, line 3 teaches various monomers. Patent at col.16, at line 46 teaches preferred monomers and at line 47 teaches (meth)acrylic acid. This means it can be acrylic acid or methacrylic acid and at line 48 teaches meth(acrylate) esters of C1-20 alcohols. This includes ethyl acrylate as the monomer. Patent at col.17, line 2 teaches preferred monomer as styrene. Patent at col.29, line 28 through col.31 teaches gradient copolymers. See examples 16-20.

Accordingly, it would be obvious to one of ordinary skill in the art at the time the invention was made to prepare compositions of '881 and use in the form of gel or sprays and substitute the film formers of patent '881 with film formers of patent '840 which teaches these polymers are used for coating and prepare the polymer by ATRP instead of conventional polymerization . The function of both the polymers is same that is both the polymers of patent '881 and '840 are film formers. Therefore one of ordinary skill in the art would substitute the film former of '881 with a film former of '840 and prepare the polymer by ATRP using the monomers ethyl acrylate, styrene and acrylic acid with the reasonable expectation of success that the film former of '840 can be used in styling and coating the hair so that a film is formed on the hair and it is well known to use polymers for hair styling taught by patent '881 and use the copolymer of '840 and prepare the copolymer by ATRP so that gradient copolymer is obtained since polymers made by ATRP has the advantage of high monomer conversion and high initiator efficiency and low poly dispersity and the gradient polymers formed by ATRP can be used in hair care products taught by patent '937. This is a prima facie case of obviousness.

Response to Arguments

Applicant's arguments filed 11/20/08 have been fully considered but they are not persuasive.

Applicant's argue that patent '881 points out the limitations of resins containing vinyl or acrylic copolymers at col. 3, line 44 - col. 4, line 11 and according to patent '881 unless those prior art resins are used in combination with a polyurethane resin, they produce poor cosmetic compositions when the primary solvent is water and thus, patent teaches away from the use of vinyl and acrylic copolymers, like those presently claimed or like the ones disclosed in patent

‘840 for inclusion in a primarily aqueous cosmetic composition without the additional inclusion of a polyurethane resin.

In response to the above argument, patent ‘881 at col.3, ll 33-35 teaches that resins typically used in hair styling compositions are vinyl based and acrylic based. Thus patent clearly teaches claimed acrylic based polymers as hair fixatives. Hair fixative polymers are film forming. Patent does not teach away from use of water instead patent teaches that the presence of water in hair spray increased the viscosity of the compositions thereby making the spray difficult. Instant claims are not drawn to hair spray compositions (emphasis added).

Applicant’s secondly argue that patent ‘840 also never discloses or suggests that the carboxy addition polymer (CAP) by itself, without the additional components of resin, tertiary amine, and curing agent, would be successful as a film forming agent on any substrate and this is particularly important in light of the fact that patent ‘881 teaches away from the use of vinyl and acrylic copolymers in primarily aqueous compositions for hair cosmetics.

In response to the above argument, patent ‘881 teaches acrylic based resins are hair fixatives and hair fixatives are film formers. Patent ‘840 under examples 1-7 teaches various CAP polymers. CAP polymers are acrylic based and they also can function as film forming agents. As explained above patent ‘881 does not teach away from using acrylic polymers in any type of hair compositions.

Applicant's thirdly argue that patent ‘840 teaches CAP formed by conventional polymerization methods at col. 4, lines 35-36 and patent ‘937 on the other hand, uses an atom transfer radical polymerization ("ATRP") method, which gives greater control over polymer composition, topology and microstructure and patent describes, for the first time, synthesis of

gradient copolymers and Examiner, however, points to nothing in the prior art that would suggest that combining the teachings of patent '840 with those of patent '947 to create a new copolymer, predicted to have unique thermal properties and uncommon mechanical behavior, would lead to a copolymer that acts as a film forming agent.

In response to the above argument patent '840 teaches CAP polymers by controlled polymerization and patent '937 describes gradient polymers by ATRP and patent at col.16, at line 46 teaches preferred monomers and at line 47 teaches (meth)acrylic acid. This means it can be acrylic acid or methacrylic acid and at line 48 teaches meth(acrylate) esters of C1-20 alcohols. This includes ethyl acrylate as the monomer and at col.17, line 2 teaches preferred monomer as styrene. From the above teaching of paten '937 one skilled in the art can use the monomers acrylic acid, styrene and ethyl acrylate (CAP polymer) and use it a as film forming agent since patent '881 describes the acrylic based polymers as hair fixatives (film forming). One of ordinary skill in the art would use the same monomers described in patent '840 and prepare the copolymer by ATRP so that the gradient copolymer have unique thermal properties and also can be used in hair cosmetics taught by patent '937 at col.6, line 58. Substituting the polymerization method of patent '840 for preparation of CAP polymer with another polymerization method which is ATRP method to obtain the same polymer is within the ken of the skilled chemist.

In conclusion, the claims are obvious within the meaning of 35 U.S.C. 103 over the combination of patents cited above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTHSNA A. VENKAT whose telephone number is 571-272-0607. The examiner can normally be reached on Monday-Friday, 10:30-7:30:1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL WOODWARD can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JYOTHSNA A VENKAT /
Primary Examiner, Art Unit 1619